IN THE CLAIMS

Please amend the claims as follows:

1. (Withdrawn) A method of actuating, comprising:

filling at least a portion of a tube with a liquid containing electrolytes, the tube having an open end and an inner surface that is electrically chargeable when in contact with the liquid;

positioning an object in fluid communication with the liquid in the tube through the open end; and

applying an electrical field along a lengthwise axis across the tube at said portion for producing a pressure in the liquid;

wherein the pressure in the liquid exerts a force on the object so as to actuate the object.

2. (Withdrawn) The method of claim 1, wherein the inner surface is electrically chargeable due to electrochemical phenomena.

3. (Withdrawn) The method of claim 1, wherein the tube is selected from the group comprising: capillary tube and micro-capillary tube.

4. (Withdrawn) The method of claim 1, further including an additional plurality of tubes each at least partially filled with a liquid containing electrolytes in fluid communication with the object.

5. (Withdrawn) The method of claim 4, wherein the plurality of tubes are formed in a porous material, the porous material being made from at least one material selected from the group consisting of: silica, and ceramics.

6. (Cancelled)

7. (Withdrawn) The method of claim 5, wherein the porous material has at least one material property selected from the group consisting of: electrically non-conductive, porous structure, micro capillaries, small particles, and hydrophilic.

8. (Withdrawn) The method of claim 1, wherein the electric field is generated from a power supply selected from the group consisting of: AC and DC, the DC power supply being linked to an on-off frequency controller.

9. (Cancelled)

10. (Withdrawn) The method of claim 1, wherein the pressure in the liquid is caused by electroosmotic flow.

11. (Withdrawn) The method of claim 5, wherein a higher force on the object is generated by adopting techniques selected from the group comprising: using porous material with small pore sizes and using porous material with large cross-sectional areas.

12. (Withdrawn) The method of claim 1, wherein a higher force on the object is attained by at least one selected from the group consisting of: using a lower concentration of the liquid containing electrolytes, and generating a stronger electric field.

13. (Cancelled)

14. (Withdrawn) The method as claimed in claim 1 when as used in an actuator.

15. (Currently amended) An actuator comprising:

a tube with an open end and an inner surface being formed of a porous material having porous channels that are [[and]] at least partially filled with a liquid containing an electrolyte, the inner surface being electrically chargeable when in contact with the liquid;

an electric field generator for generating a field along a lengthwise axis of the tube to induce a pressure in the liquid; and

an object in fluid communication with the liquid in the tube through the open end such that the pressure in the liquid exerts a force on the object;

[[and]] wherein the force on the object is able to actuate the object.

16. (Previously presented) The actuator of claim 15, wherein the inner surface is electrically chargeable due to electrochemical phenomena.

17. (Currently amended) The actuator of claim 15, wherein the ~~tube is~~ porous channels are selected from the group consisting of: capillary tube and micro-capillary tube.

18. (Canceled)

19. (Currently amended) The actuator of claim [[18]]15, wherein ~~the plurality of tubes is formed in a porous material,~~ the porous material ~~being at least one material selected from the group consisting~~ includes one of: silica, and ceramics.

20. (Cancelled)

21. (Previously presented) The actuator of claim 19, wherein the porous material has at least one material property selected from the group consisting of: electrically non-conductive, porous structure, micro capillaries, small particles, and hydrophilic.

22. (Previously presented) The actuator of claim 15, wherein the electric field generator generates power supplies selected from the group consisting of: AC and DC, the DC power supply being linked to an on-off frequency controller.

23. (Cancelled)

24. (Previously presented) The actuator of claim 15, wherein the pressure in the liquid is caused by electroosmotic flow.

25. (Currently amended) The actuator of claim 19, wherein when one of: the porous channels have a small size; the porous channels have a large cross sectional; the liquid containing electrolytes has a relatively low concentration; and the electric field is relatively strong, a higher force on the object is generated ~~by adopting techniques selected from the group consisting of: using porous material with small pore sizes, using porous material with large cross-sectional areas, using a lower concentration of the liquid containing electrolytes, and generating a stronger electric field~~.

26-27. (Cancelled)

28. (Previously presented) The actuator of claim 15, further comprising a housing defining a chamber containing the tube, and a cylinder in fluid communication with the chamber, wherein the tube is in the cylinder and the object is a piston slideably mounted in the cylinder.

29. (Previously presented) The actuator of claim 28, wherein the piston is biased to resist a force exerted thereon from the tube.

30. (Previously presented) The actuator of claim 29, further comprising a displacement amplifier operatively connected to the piston.

31. (Previously presented) The actuator of claim 28, wherein the piston has silicone seals.

32. (Previously presented) The actuator of claim 19, further comprising a compensating piston to prevent a drop of pressure in the porous material.

33. (Previously presented) The actuator of claim 28, further comprising a vent in the housing for allowing the exchange of air within the chamber.

34-35. (Cancelled)